



Sommersemester 2020

**Oberseminar**  
**Geometrische Analysis, Differentialgeometrie und Relativitätstheorie**

Am Donnerstag, den 23.04.2020 spricht um 14 Uhr c. t. per Videoübertragung

**Prof. Dr. Klaus Kröncke**  
(Universität Hamburg)

über das Thema

**Long-time estimates for heat semigroups and the Ricci flow**

We will establish long-time and derivative estimates for the heat semigroup of various natural Laplace-type operators on asymptotically locally Euclidean (ALE) manifolds. These include the Lichnerowicz Laplacian of a Ricci-flat ALE manifold, provided that it is spin and admits a parallel spinor. These estimates will be used to prove its  $L^p$ -stability under the Ricci flow for  $p < n$ . A positive scalar curvature rigidity theorem will also be deduced. This is joint work with Oliver Lindblad Petersen.

Hierzu wird herzlich eingeladen. Bei Interesse bitte per E-Mail an [angelika.spoerer-schmidle@uni-tuebingen.de](mailto:angelika.spoerer-schmidle@uni-tuebingen.de) anmelden, um den Link zur Videoübertragung zu erhalten.

C. Cederbaum, G. Huisken